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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,201	07/21/2003	David J. Hannapel	82162/171 (ISURF #02885)	1454

7590 01/26/2007
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EXAMINER

BAUM, STUART F

ART UNIT	PAPER NUMBER
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1638

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

TV

Office Action Summary	Application No. 10/624,201	Applicant(s) HANNAPEL ET AL.	
	Examiner Stuart F. Baum	Art Unit 1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7-16,18-23,25,43-47,49 and 57-68 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,7-12,14,15,18,19,21,22,25,43,45,46,49,58,59,62,63,66 and 67 is/are rejected.
- 7) ☒ Claim(s) 2,5,13,16,20,23,44,47,57,60,61,64,65 and 68 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. The amendment filed 11/7/2006 has been entered.
2. Claims 1-5, 7-16, 18-23, 25, 43-47, 49 and 57-68 are pending.
Claims 6, 17, 24, 26-42, 48 and 50-56 have been canceled.
3. Claims 1-5, 7-16, 18-23, 25, 43-47, 49 and 57-68 drawn to SEQ ID NO:1 encoding SEQ ID NO:2 are examined in the present office action.
4. Rejections and objections not set forth below are withdrawn.
5. The text of those sections of Title 35, U.S. Code not included in this office action can be found in a prior office action.

New Matter

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1, 3, 7-12, 14, 18-19, 21, 25, 43, 45, 48, 58, 62 and 66 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claims have been amended to recite "90% sequence homology". Applicants fail to point to support for the phrase in the instant specification. Upon a cursory search of the

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specification, support could not be found. Applicants are required to point to support for “90% sequence homology” or to amend the claims to delete the NEW MATTER.

Written Description

7. Claims 1, 3-4, 7, 8-12, 14-15, 18-19, 21-22, 25, 43, 45-46, 49, 58-59, 62-63 and 66-67 remain rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This rejection is maintained for the reasons of record set forth in the Official action mailed 6/14/2006. Applicant's arguments filed 11/7/2006 have been fully considered but they are not persuasive.

Applicants traverse the written description rejection in view of the instantly amended claims (page 11 of Remarks, 5th paragraph).

The Office contends the amended claims are drawn to nucleotide sequences having at least 90% sequence homology to SEQ ID NO:1, or nucleotide sequences encoding polypeptides having at least 90% sequence homology to SEQ ID NO:2, or nucleotide sequences that hybridize to SEQ ID NO:1 under stringent conditions as recited for example in claim 1c, but Applicants have not disclosed a representative number of sequences that are encompassed by the claims and encode a protein with the same activity as the protein of SEQ ID NO:2. Applicants have also not disclosed essential regions or domains of the protein of SEQ ID NO:2. Applicants disclose that the BEL proteins are novel (page 90 of Specification, lines 31-32) and Applicants have not disclosed other BEL homologues from other plants that can be used in an alignment. As a final

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note, the Office directs Applicants' attention to the written description guidelines, Example 14, where claims drawn to 95% sequence identity can be considered as long as a specific activity of the encoded protein is recited in the claim.

Scope of Enablement

8. Claims 1, 3-4, 7, 8-12, 14-15, 18-19, 21-22, 25, 43, 45-46, 49, 58-59, 62-63 and 66-67 remain rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for an isolated nucleic acid molecule of SEQ ID NO:1 encoding the polypeptide of SEQ ID NO:2, a DNA construct and expression vector comprising said isolated nucleic acid molecule, wherein potato plants transformed with said nucleic acid molecule exhibited tuber formation under LD conditions, whereas control plants produced tubers only under SD conditions, and wherein transformed plants produced more tubers and larger tubers than control plants and were more responsive to inductive conditions compared to control plants, and wherein plants overexpressing SEQ ID NO:1 were taller and had a greater weight compared to control plants; and host cell, transgenic plant, and transgenic plant seed transformed with the isolated nucleic acid molecule, does not reasonably provide enablement for an isolated nucleic acid molecule encoding a BEL transcription factor from *Solanum tuberosum* wherein said nucleic acid molecule comprises a nucleotide sequence that has at least 90% sequence homology to a nucleotide sequence of SEQ ID NO:1 and that encodes a protein that has at least 90% sequence homology to SEQ ID NO:2, or comprises a nucleotide sequence that hybridizes to the nucleic acid sequence of SEQ ID NO:1 under stringent conditions as recited in claim 1(c); a DNA construct, expression vector, host cell, transgenic plant, transgenic plant seed, and methods

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comprising said nucleic acid molecule. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims. This rejection is maintained for the reasons of record set forth in the Official action mailed 6/14/2006. Applicant's arguments filed 11/7/2006 have been fully considered but they are not persuasive.

Applicants traverse the enablement rejection in view of the instantly amended claims (page 11 of Remarks, 6th paragraph).

The Office contends that in the absence of guidance, undue trial and error experimentation would be required for one of ordinary skill in the art to screen through the multitude of non-exemplified sequences, either by using non-disclosed fragments of SEQ ID NO:1 as probes or by designing primers to undisclosed regions of SEQ ID NO:2 and isolating or amplifying fragments, subcloning the fragments, producing expression vectors and transforming plants therewith, in order to identify those, if any, that when over-expressed produce a potato plant with increased number and weight of tubers.

Therefore, given the breadth of the claims; the lack of guidance and examples; the unpredictability in the art; and the state-of-the-art as discussed above, undue experimentation would be required to practice the claimed invention, and therefore the invention is not enabled.

9. Claims 1-5, 7-16, 18-23, 25, 43-47, 49 and 57-68 are deemed free of the prior art, given the failure of the prior art to teach or reasonably suggest an isolated polynucleotide of SEQ ID NO:1 encoding SEQ ID NO:2; DNA construct, expression vector, host cell, transgenic plant and method for increasing the growth rate of a plant comprising said polynucleotide.

10. Claims 2, 5, 13, 16, 20, 23, 44, 47, 57, 60, 61, 64-65 and 68 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

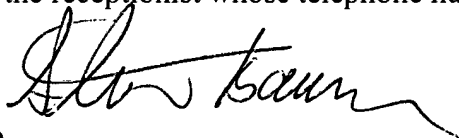
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stuart F. Baum whose telephone number is 571-272-0792. The examiner can normally be reached on M-F 8:30-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached at 571-272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1600.

A handwritten signature in black ink, appearing to read "Stuart F. Baum", with a stylized flourish at the end.

Stuart F. Baum Ph.D.
Primary Examiner
Art Unit 1638
January 10, 2007

STUART F BAUM, PH.D
PRIMARY EXAMINER